CLAIMS

1. A system for immobilizing adjacent spinous processes, comprising:

a first plate having at least one adjustable grip adapted for gripping a spinous process; and

a second plate connected with the first plate, the second plate having at least one adjustable grip adapted for gripping a spinous process; and

at least one spacer moveably connected between the plates, the at least one spacer adapted to be positioned between adjacent spinous processes in order to adjust the orientation of the spacer relative to the spinous processes.

2. The system for immobilizing adjacent spinous processes of claim 1, wherein the at least one adjustable grip is adapted to be adjusted relative to the spinous process such that a grip can be tightened or loosened.

3. The system for immobilizing adjacent spinous processes of claim 2, wherein the at least one adjustable grip includes one of a bolt and a slotted screw for adjusting the at least one adjustable grip.

4. The system for immobilizing adjacent spinous processes of claim 1, wherein the spacer can be expanded.

5. The system for immobilizing adjacent spinous processes of claim 1, wherein the at least one spacer is substantially elliptical in cross-section.

6. The system for immobilizing adjacent spinous processes of claim 1, wherein the at least one spacer is adapted to be positioned close to a spine and adjacent to portions of the spinous processes to spread the load placed upon the at least one spacer by the adjacent spinous processes.

7. The system for immobilizing adjacent spinous processes of claim 1, wherein the at least one spacer is movably attached to the system so that the at least one spacer can attach at two or more locations on the system.

8. The system for immobilizing adjacent spinous processes of claim 1, wherein the first plate is connected with the second plate by at least one pin extending substantially perpendicular to the first and second plates so that the at least one pin can support a spacer.

9. The system for immobilizing adjacent spinous processes of claim 8, wherein the first plate includes at least one slot for positioning a first end of the at least one pin and the second plate includes at least one slot for positioning a second end of the at least one pin such that the position of the at least one pin can be adjusted relative to the first plate and the second plate.

10. The system for immobilizing adjacent spinous processes of claim 9, wherein the at least one slot includes a plurality of lobes for positioning a pin such that the pin does not slip within the at least one slot.

11. The system for immobilizing adjacent spinous processes of claim 9, wherein knurls surrounding the at least one slot prevent a pin from slipping within the at least one slot.

12. A system for immobilizing adjacent spinous processes, comprising:

a first plate;

a second plate connected with the first plate by at least one pin; and

at least one clamp adapted to grip a spinous process, the at least one clamp including:

a first grip connected with the first plate, the first grip adapted to be positioned in contact with a first side of the spinous process; and

a second grip connected with the second plate, the second grip adapted to be positioned in contact with a second side of the spinous process; and

a spacer moveably connected with the at least one pin, the spacer adapted to be positioned between spinous processes.

13. The system for immobilizing adjacent spinous processes of claim 12, wherein a position of the at least one pin can be adjusted along a portion of the length of the first and second plates.

14. The system for immobilizing adjacent spinous processes of claim 13, wherein the portion of the length of the first and second plates is defined by a length of at least one slot.

15. The system for immobilizing adjacent spinous processes of claim 14, wherein the at least one slot includes a plurality of one of cut-outs, lobes, and scallops such that a pin can be positioned to prevent the pin from slipping within the at least one slot.

16. The system for immobilizing adjacent spinous processes of claim 14, including knurls associated with at least one slot to prevent the pin from slipping within the at least one slot.

17. The system for immobilizing adjacent spinous processes of claim 12, wherein the at least one spacer is substantially elliptical in cross-section.

18. The system for immobilizing adjacent spinous processes of claim 12, wherein the at least one spacer is adapted to be positioned close to a spine and adjacent to portions of the spinous processes to spread the load placed upon the at least one spacer by the adjacent spinous processes.

19. The system for immobilizing adjacent spinous processes of claim 17, wherein the at least one spacer is movably attached to the system so that the at least one spacer can attach at two or more locations on the system.

20. A system for immobilizing adjacent spinous processes, comprising:

a first plate having:

a first adjustable grip adapted for gripping a first spinous process;

a second adjustable grip adapted for gripping a second spinous process;

a first slot at a first position;

a second slot at a second position; and

a third slot at a third position;

a second plate having:

a first adjustable grip adapted for gripping the first spinous process; and

a second adjustable grip adapted for gripping the second spinous process;

a first slot at a first position;

a second slot at a second position; and

a third slot at a third position;

a first pin positioned in the first slot of the first plate and the first slot of the second plate, thereby connecting the first plate with the second plate;

a second pin positioned in the second slot of the first plate and the second slot of the second plate, thereby connecting the first plate with the second plate;

a third pin positioned in the third slot of the first plate and the third slot of the second plate, thereby connecting the first plate with the second plate;

a first spacer moveably connected with the first pin;

a second spacer moveably connected with the second pin; and

a third spacer moveably connected with the third pin.

21. The system for immobilizing adjacent spinous processes of claim 20, wherein each of the adjustable grips is adapted to be adjusted relative to the spinous process so as to be tightened relative to the spinous processes.

22. The system for immobilizing adjacent spinous processes of claim 21, wherein each of the adjustable grips includes one of a bolt and a slotted screw to adjust the adjustable grip.

23. The system for immobilizing adjacent spinous processes of claim 20, wherein at least on of the first, second and third spacers can be expanded.

24. The system for immobilizing adjacent spinous processes of claim 20, wherein each of the first, second, and third spacers is substantially elliptical in cross-section.

25. The system for immobilizing adjacent spinous processes of claim 20, wherein each of the first, second, and third spacers is adapted to be positioned close to a spine and adjacent to portions of the spinous processes to spread the load placed upon the spacer by the adjacent spinous processes.

26. The system for immobilizing adjacent spinous processes of claim 20, wherein each of the first, second, and third spacers is movably attached to the system so that the spacer can be attached at two or more locations on the system.

27. The system for immobilizing adjacent spinous processes of claim 20, wherein each of the first, second, and third slots in the first plate and the second plate includes a plurality of cut-outs, lobes, or scallops such that pins can be positioned to prevent the pins from slipping within the slots.

28. The system for immobilizing adjacent spinous processes of claim 20, wherein knurls are associated with each of the first, second, and third slots in the first plate and the second plate prevent the pins from slipping within the slot.

29. A method for immobilizing adjacent spinous processes, comprising:

placing at least one spacer between adjacent spinous processes by inserting each of the at least one spacer between a separate pair of spinous processes;

either prior to or after the placing step, operably connecting a first plate with the at least one spacer, such that at least one grip attached to the first plate is positioned adjacent to a first flat side of a spinous process;

operably connecting a second plate with the at least one spacer;

adjusting the at least one grip on the first plate such that the at least one grip is tight against the spinous process; and

adjusting the at least one grip on the second plate such that the at least one grip is tight against the spinous process.

30. The method for immobilizing adjacent spinous processes of claim 29, wherein each of the at least one spacer is connected with the first plate by a first end of a pin and is moveable relative to the pin.

31. The method of immobilizing adjacent spinous processes of claim 30, wherein the first end of the pin is connected with the first plate by one of a bolt and a threaded screw.

32. The method of immobilizing adjacent spinous processes of claim 29, wherein the placing step places the spacer such that the spacer is movable relative to the plates.

33. The method of immobilizing adjacent spinous processes of claim 29, wherein the placing step places the spacer such that the spacer is rotatable relative to the plate.

34. The method of immobilizing adjacent spinous processes of claim 29, wherein each of the at least one grip is adjusted by rotating one of a bolt and a threaded screw.

35. A method for immobilizing adjacent spinous processes, comprising:

placing a spacer between first and second adjacent spinous processes by inserting the spacer between the spinous processes and placing a second spacer between second and third spinous processes;

either prior to or after the placing steps, operably connecting a first plate to the spacer;

operably connecting a second plate to the spacers;

adjusting the position of the first spacer and the position of the second spacer in order to immobilize the second spinous process.

36. The method of claim 35 wherein said placing step includes placing the spacers between the spinous processes from the sides of the spinous processes.

37. The method of claim 35 including a first grip located on the first plate and a second grip located on the second plate and the method including the step of tightening the first grip and the second grip about a spinous process.

38. The method of claim 35 including adjusting the position of a grip relative to a spinous process in order to secure the first and second plates relative to the spinous process.

39. The method of claim 35 including the step of placing a third spacer between the third and a fourth spinous process and adjusting the position of the third spacer in order to immobilize the third spinous process between the second and the third spacers.

40. A system that is adapted to immobilize spinous processes comprising:

a structure;

a first spacer that is rotatably mounted to the structure;

a second spacer that is rotatably mounted to the structure; and wherein said first and second spacers are shaped and adapted to be positioned between spinous processes.

41. The system of claim 40 wherein said spacers are cylindrical in shape.

42. The system of claim 40 wherein said spacers are one of elliptical, ovoid, oval, and race track in shape.

43. The system of claim 40 wherein said first and second spacers can rotate about a first axis and a second axis respectively, and wherein the position of at least one of the first axis and the second axis can be adjusted relative to the system.

44. The system of claim 40 including means for affixing at least one of the first spacer and the second spacer in different positions relative to the system in order to immobilize a spinous process between the first and second spacer.

45. The system of claim 40 including the structure including a slot and at least one of the first and second spacers includes a mechanism that can secure the at least first and second spacer in various locations in the slot.

46. The system of claim 40 including the structure including a slot having at least one of scallops, cut-outs, and lobes and at least one of the first and second spacers can be secured at different locations in the slot by being positioned relative to the at least one of scallops, cut-outs, and lobes.

47. The system of claim 40 including means adapted for clamping the system to one or more spinous processes.

48. The system of claim 40 including a grip that can be adjustably positioned in order to tighten the system against a spinous process.

49. The system of claim 40 wherein at least one of the first spacer and the second spacer can be expanded.